IN THE CLAIMS:

The following listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A computer-implemented method for creating a prototype that includes motion control, machine vision, and Data Acquisition (DAQ) functionality, the method comprising:

displaying a graphical user interface (GUI) that provides GUI access to a set of operations, wherein the set of operations includes one or more motion control operations, one or more machine vision operations, and one or more DAQ operations;

creating a sequence of operations, wherein creating the sequence comprises including a plurality of operations in the sequence in response to user input selecting each operation in the plurality of operations from the GUI, wherein including the plurality of operations in the sequence in response to the user input selecting each operation in the plurality of operations from the GUI comprises including the plurality of operations in the sequence without receiving user input specifying program code for performing the plurality of operations;

wherein the plurality of operations included in the sequence includes at least one motion control operation, at least one machine vision operation, and at least one DAQ operation, wherein at least one of the DAQ operations included in the sequence is operable to control a DAQ measurement device to acquire measurement data of a device under test ~~based on an electrical signal from a sensor device coupled to the device under test~~;

wherein the method further comprises storing information representing the sequence of operations in a data structure, wherein the sequence of operations comprises the prototype.

2. (Previously Presented) The method of claim 1, further comprising:

accessing the data structure to determine the plurality of operations in the sequence;

determining software routines to execute in order to perform the plurality of operations in the sequence; and

executing the software routines.

3. (Previously Presented) The method of claim 1, further comprising:

receiving user input specifying a first parameter value for a first operation in the sequence;

wherein said storing the information representing the sequence of operations in the data structure comprises storing the first parameter value in the data structure;

wherein the method further comprises executing software routines corresponding to operations in the sequence, wherein executing the software routines comprises executing a first software routine corresponding to the first operation, wherein said executing the first software routine comprises passing the first parameter value to the first software routine.

4. (Previously Presented) The method of claim 1,

wherein the information representing the sequence of operations in the data structure does not comprise program code.

5. (Canceled)

6. (Previously Presented) The method of claim 1,

wherein the machine vision operation(s) in the sequence are operable to perform one or more of:

acquire one or more images of the device under test; and/or

analyze one or more acquired images of the device under test.

7. (Previously Presented) The method of claim 1,

wherein the motion control operation(s) in the sequence are operable to control a motion control device in order to move the device under test.

8. (Previously Presented) The method of claim 1,

wherein the machine vision operation(s) in the sequence are operable to analyze one or more acquired images of the device under test; and

wherein the motion control operation(s) in the sequence are operable to control a motion control device in order to move the device under test.

9. (Previously Presented) The method of claim 1,

wherein the prototype is operable to:

control a motion control device to move the device under test;

control an image acquisition device to acquire one or more images of the device under test; and

control the DAQ measurement device to acquire the measurement data of the device under test.

10. (Previously Presented) The method of claim 1, further comprising:

performing the sequence of operations;

wherein said performing the sequence of operations comprises executing software routines in order to perform each operation in the sequence.

11. (Previously Presented) The method of claim 1, further comprising:

creating program instructions executable to perform the sequence of operations; and

executing the program instructions.

12. (Previously Presented) The method of claim 1, further comprising:

configuring a first operation in the sequence in response to user input specifying configuration information for the first operation, wherein configuring the first operation changes a function performed by the first operation; and

displaying information in response to the user input specifying the configuration information in order to visually indicate the change in the function performed by the first operation.

13. (Previously Presented) The method of claim 12,

wherein the user input specifying the configuration information for the first operation does not include user input specifying program code.

14. (Previously Presented) The method of claim 12, further comprising:

displaying a graphical panel including graphical user interface elements for setting properties of the first operation, wherein the user input specifying the configuration information for the first operation comprises user input to the graphical panel to set one or more properties of the first operation.

15. (Previously Presented) The method of claim 14,

wherein the graphical panel is automatically displayed in response to including the first operation in the sequence.

16. (Previously Presented) The method of claim 14, further comprising:

receiving user input requesting to configure the first operation; and

displaying the graphical panel for configuring the first operation in response to the request.

17. (Previously Presented) The method of claim 1,

wherein the GUI includes an area which visually represents the operations in the sequence;

wherein the method further comprises:

for each operation included in the sequence, updating the area visually representing the operations in the sequence to illustrate the included operation, in response to the user input selecting the operation from the GUI.

18. (Previously Presented) The method of claim 17,

wherein the area visually representing the operations in the sequence displays a plurality of icons, wherein each icon visually indicates one of the operations in the sequence;

wherein said updating the area visually representing the operations in the sequence to illustrate the included operation comprises displaying a new icon to visually indicate the included operation.

19. (Previously Presented) The method of claim 1,

wherein the GUI displays a plurality of buttons, wherein each button corresponds to a particular operation and is operable to add the operation to the sequence in response to user input selecting the button;

wherein said including the plurality of operations in the sequence in response to the user input selecting each operation in the plurality of operations from the GUI comprises including the plurality of operations in the sequence in response to user input selecting corresponding buttons from the plurality of buttons.

20. (Previously Presented) The method of claim 1,

wherein the one or more motion control operations in the set of operations to which the GUI provides GUI access include:

a straight line move operation;

an arc move operation; and

a contoured move operation.

21. (Previously Presented) The method of claim 1, wherein the sequence includes two or more motion control operations, and wherein the method further comprises:

displaying a graph illustrating a spatial trajectory cumulatively performed by the two or more motion control operations, wherein the graph provides a visual preview of the spatial trajectory cumulatively performed by the two or more motion control operations.

22. (Previously Presented) The method of claim 21,

wherein the displayed graph comprises a two-dimensional graph illustrating a two-dimensional display of the spatial trajectory performed by the two or more motion control operations.

23. (Previously Presented) The method of claim 21,

wherein the displayed graph comprises a three-dimensional graph illustrating a three-dimensional display of the spatial trajectory performed by the two or more motion control operations.

24. (Previously Presented) The method of claim 1, further comprising:

automatically generating a graphical program based on the sequence of operations, wherein the graphical program is executable to perform the sequence of operations, wherein the graphical program comprises a plurality of interconnected nodes visually indicating functionality of the graphical program, wherein automatically generating the graphical program comprises automatically including the plurality of interconnected nodes in the graphical program without user input specifying the nodes.

25. (Canceled)

26. (Previously Presented) The method of claim 24,

wherein the graphical program comprises a graphical data flow program, wherein the plurality of interconnected nodes visually indicates data flow that occurs among the nodes.

27. (Previously Presented) The method of claim 1, further comprising:

automatically generating a text-based program based on the sequence of operations, wherein the text-based program is executable to perform the specified sequence of operations, wherein the text-based program comprises a plurality of lines of textual source code, wherein automatically generating the text-based program comprises automatically including the lines of textual source code in the text-based program without user input specifying the lines of textual source code.

28. (Previously Presented) The method of claim 1,

wherein said displaying the GUI comprises a first application displaying the GUI;

wherein said creating the sequence comprises the first application creating the sequence;

wherein the method further comprises:

the first application receiving a request to invoke execution of the sequence from a second program external to the first application; and

the first application executing the sequence of operations in response to the request from the second program, wherein the first application executing the sequence comprises the first application invoking execution of software routines to perform the plurality of operations in the sequence.

29. (Previously Presented) The method of claim 1, further comprising:

automatically converting the sequence of operations to a hardware configuration format usable for configuring configurable hardware of an embedded device to perform the sequence of operations; and

configuring the configurable hardware of the embedded device to perform the sequence of operations using the hardware configuration format.

30. (Currently Amended) A computer-implemented method for creating a prototype that includes motion control, machine vision, and Data Acquisition (DAQ) functionality, the method comprising:

displaying a graphical user interface (GUI) that provides GUI access to a set of operations, wherein the set of operations includes one or more motion control operations, one or more machine vision operations, and one or more DAQ operations;

creating a sequence of operations, wherein creating the sequence comprises including a plurality of operations in the sequence in response to user input selecting each operation in the plurality of operations from the GUI, wherein including the plurality of operations in the sequence in response to the user input selecting each operation in the plurality of operations from the GUI comprises including the plurality of operations in

the sequence without receiving user input specifying program code for performing the plurality of operations;

wherein the plurality of operations included in the sequence includes at least one motion control operation, at least one machine vision operation, and at least one DAQ operation, wherein at least one of the DAQ operations included in the sequence is operable to control a DAQ measurement device to acquire measurement data of a device under test ~~based on an electrical signal from a sensor device coupled to the device under test~~;

wherein the method further comprises performing the specified sequence of operations, wherein the operations in the sequence implement the motion control, machine vision, and DAQ functionality of the prototype.

31. (Canceled)

32. (Previously Presented) The method of claim 30, further comprising:

storing information representing the sequence of operations in a data structure.

33. (Previously Presented) The method of claim 32,

wherein the information representing the sequence of operations in the data structure does not comprise program code.

34. (Previously Presented) The method of claim 32, wherein said performing the sequence of operations comprises:

accessing the data structure to determine the plurality of operations in the sequence;

determining software routines to execute in order to perform the plurality of operations in the sequence; and

executing the software routines.

35. (Previously Presented) The method of claim 32, further comprising:

receiving user input specifying a first parameter value for a first operation in the sequence;

wherein said storing the information representing the sequence of operations in the data structure comprises storing the first parameter value in the data structure;

wherein said performing the sequence of operations comprises executing software routines corresponding to operations in the sequence, wherein executing the software routines comprises executing a first software routine corresponding to the first operation, wherein said executing the first software routine comprises passing the first parameter value to the first software routine.

36. (Currently Amended) A computer-implemented method for creating a prototype that includes motion control, machine vision, and Data Acquisition (DAQ) functionality, the method comprising:

creating a sequence of operations, wherein creating the sequence comprises including a plurality of operations in the sequence in response to user input selecting each operation in the plurality of operations, wherein including the plurality of operations in the sequence in response to the user input selecting each operation in the plurality of operations comprises including the plurality of operations in the sequence without receiving user input specifying program code for performing the plurality of operations;

wherein the method further comprises recording the sequence of operations in a data structure, wherein the sequence of operations comprises the prototype;

wherein the operations in the sequence include at least one motion control operation, at least one machine vision operation, and at least one DAQ operation, wherein the operations in the sequence are operable to:

control a motion control device to move an object;

control an image acquisition device to acquire one or more images of the object; and

control a DAQ measurement device to acquire measurement data of the object ~~based on an electrical signal from a sensor device coupled to the object~~.

37. (Currently Amended) A memory medium for creating a prototype that includes motion control, machine vision, and Data Acquisition (DAQ) functionality, the memory medium comprising program instructions executable to:

display a graphical user interface (GUI) that provides access to a set of operations, wherein the set of operations includes one or more motion control operations, one or more machine vision operations, and one or more DAQ operations;

create a sequence of operations, wherein creating the sequence comprises including a plurality of operations in the sequence in response to user input selecting each operation in the plurality of operations from the GUI, wherein including the plurality of operations in the sequence in response to the user input selecting each operation in the plurality of operations from the GUI comprises including the plurality of operations in the sequence without receiving user input specifying program code for performing the plurality of operations;

wherein the plurality of operations included in the sequence includes at least one motion control operation, at least one machine vision operation, and at least one DAQ operation, wherein at least one of the DAQ operations included in the sequence is operable to control a DAQ measurement device to acquire measurement data of a device under test ~~based on an electrical signal from a sensor device coupled to the device under test~~;

wherein the program instructions are further executable to store information representing the sequence of operations in a data structure, wherein the sequence of operations comprises the prototype.

38. (Previously Presented) The memory medium of claim 37, wherein the program instructions are further executable to:

access the data structure to determine the plurality of operations in the sequence;

determine software routines to execute in order to perform the plurality of operations in the sequence; and

execute the software routines.

39. (Previously Presented) The memory medium of claim 37, wherein the program instructions are further executable to:

receive user input specifying a first parameter value for a first operation in the sequence;

wherein said storing the information representing the sequence of operations in the data structure comprises storing the first parameter value in the data structure;

wherein the program instructions are further executable to execute software routines corresponding to operations in the sequence, wherein executing the software routines comprises executing a first software routine corresponding to the first operation, wherein said executing the first software routine comprises passing the first parameter value to the first software routine.

40. (Previously Presented) The memory medium of claim 37,

wherein the information representing the sequence of operations in the data structure does not comprise program code.

41. (Canceled)

42. (Previously Presented) The memory medium of claim 37,

wherein the prototype is operable to:

control a motion control device to move the device under test;

analyze one or more acquired images of the device under test; and

control the DAQ measurement device to acquire the measurement data of the device under test.

43. (Currently Amended) A system for creating a prototype that includes motion control, machine vision, and Data Acquisition (DAQ) functionality, the system comprising:

a processor;

a memory storing program instructions;

a display device;

wherein the processor is operable to execute the program instructions stored in the memory to:

display a graphical user interface (GUI) on the display device that provides GUI access to a set of operations, wherein the set of operations includes one or more motion control operations, one or more machine vision operations, and one or more DAQ operations;

create a sequence of operations, wherein creating the sequence comprises including a plurality of operations in the sequence in response to user input selecting each operation in the plurality of operations from the GUI, wherein including the plurality of operations in the sequence in response to the user input selecting each operation in the plurality of operations from the GUI comprises including the plurality of operations in the sequence without receiving user input specifying program code for performing the plurality of operations;

wherein the plurality of operations included in the sequence includes at least one motion control operation, at least one machine vision operation, and at least one DAQ operation, wherein at least one of the DAQ operations included in the sequence is operable to control a DAQ measurement device to acquire measurement data of a device under test ~~based on an electrical signal from a sensor device coupled to the device under test~~;

wherein the processor is operable to further execute the program instructions stored in the memory to store information representing the sequence of operations in a data structure, wherein the sequence of operations comprises the prototype.

44. (Currently Amended) A system for creating a prototype that includes motion control, machine vision, and Data Acquisition (DAQ) functionality, the system comprising:

means for displaying a graphical user interface (GUI) that provides GUI access to a set of operations, wherein the set of operations includes one or more motion control operations, one or more machine vision operations, and one or more DAQ operations;

means for creating a sequence of operations, wherein creating the sequence comprises including a plurality of operations in the sequence in response to user input

selecting each operation in the plurality of operations from the GUI, wherein including the plurality of operations in the sequence in response to the user input selecting each operation in the plurality of operations from the GUI comprises including the plurality of operations in the sequence without receiving user input specifying program code for performing the plurality of operations;

wherein the plurality of operations included in the sequence includes at least one motion control operation, at least one machine vision operation, and at least one DAQ operation, wherein at least one of the DAQ operations included in the sequence is operable to control a DAQ measurement device to acquire measurement data of a device under test ~~based on an electrical signal from a sensor device coupled to the device under test~~;

wherein the system further comprises means for storing information representing the sequence of operations in a data structure, wherein the sequence of operations comprises the prototype.

45. (Previously Presented) A computer-implemented method for creating a prototype that includes motion control and machine vision functionality, the method comprising:

displaying a graphical user interface (GUI) that provides GUI access to a set of operations, wherein the set of operations includes one or more motion control operations and one or more machine vision operations;

creating a sequence of operations, wherein creating the sequence comprises including a plurality of operations in the sequence in response to user input selecting each operation in the plurality of operations from the GUI, wherein including the plurality of operations in the sequence in response to the user input selecting each operation in the plurality of operations from the GUI comprises including the plurality of operations in the sequence without receiving user input specifying program code for performing the plurality of operations;

wherein the plurality of operations included in the sequence includes at least one motion control operation and at least one machine vision operation;

wherein the method further comprises storing information representing the sequence of operations in a data structure, wherein the sequence of operations comprises the prototype.

46. (Previously Presented) The method of claim 45, further comprising:

accessing the data structure to determine the plurality of operations in the sequence;

determining software routines to execute in order to perform the plurality of operations in the sequence; and

executing the software routines.

47. (Canceled)

48. (Previously Presented) The method of claim 45,

wherein the prototype is operable to perform one or more of:

control motion of a device;

acquire images; and

analyze the acquired images.

49. (Previously Presented) The method of claim 45,

wherein the prototype is operable to:

control motion of a device;

acquire images; and

analyze the acquired images.

50. (Previously Presented) The method of claim 45,

wherein the prototype is operable to:

control a motion control device to move an object; and

control an image acquisition device to acquire one or more images of the object.

51. (Previously Presented) The method of claim 45, further comprising:

performing the sequence of operations;

wherein said performing the sequence of operations comprises executing software routines in order to perform each operation in the sequence.

52. (Previously Presented) The method of claim 45, further comprising:

automatically generating a graphical program based on the sequence of operations, wherein the graphical program is executable to perform the sequence of operations, wherein the graphical program comprises a plurality of interconnected nodes that visually indicate functionality of the graphical program, wherein automatically generating the graphical program comprises automatically including the plurality of interconnected nodes in the graphical program without user input specifying the nodes.

53. (Currently Amended) A computer-implemented method for creating a prototype that includes machine vision and Data Acquisition (DAQ) functionality, the method comprising:

displaying a graphical user interface (GUI) that provides GUI access to a set of operations, wherein the set of operations includes one or more machine vision operations and one or more DAQ operations;

creating a sequence of operations, wherein creating the sequence comprises including a plurality of operations in the sequence in response to user input selecting each operation in the plurality of operations from the GUI, wherein including the plurality of operations in the sequence in response to the user input selecting each operation in the plurality of operations from the GUI comprises including the plurality of operations in the sequence without receiving user input specifying program code for performing the plurality of operations;

wherein the plurality of operations included in the sequence includes at least one machine vision operation and at least one DAQ operation, wherein at least one of the DAQ operations included in the sequence is operable to control a DAQ measurement device to acquire measurement data of a device under test ~~based on an electrical signal from a sensor device coupled to the device under test~~;

wherein the method further comprises storing information representing the sequence of operations in a data structure, wherein the sequence of operations comprises the prototype.

54. (Previously Presented) The method of claim 53, further comprising:

accessing the data structure to determine the plurality of operations in the sequence;

determining software routines to execute in order to perform the plurality of operations in the sequence; and

executing the software routines.

55. - 56. (Canceled)

57. (Previously Presented) The method of claim 53,

wherein the prototype is operable to:

acquire one or more images of the device under test;

analyze the acquired images of the device under test; and

acquire the measurement data of the device under test.

58. (Previously Presented) The method of claim 53,

wherein the prototype is operable to:

control an image acquisition device to acquire one or more images of the device under test; and

control the DAQ measurement device to acquire the measurement data of the device under test.

59. (Currently Amended) The method of claim 53, further comprising:

performing the sequence of operations;

wherein said performing the sequence of operations comprises executing software routines in order to perform each operation in the sequence.

60. (Previously Presented) The method of claim 53, further comprising:

automatically generating a graphical program based on the sequence of operations, wherein the graphical program is executable to perform the sequence of operations, wherein the graphical program comprises a plurality of interconnected nodes that visually indicate functionality of the graphical program, wherein automatically generating the graphical program comprises automatically including the plurality of interconnected nodes in the graphical program without user input specifying the nodes.

61. (Currently Amended) A computer-implemented method for creating a prototype that includes motion control and Data Acquisition (DAQ) functionality, the method comprising:

displaying a graphical user interface (GUI) that provides GUI access to a set of operations, wherein the set of operations includes one or more motion control operations and one or more DAQ operations;

creating a sequence of operations, wherein creating the sequence comprises including a plurality of operations in the sequence in response to user input selecting each operation in the plurality of operations from the GUI, wherein including the plurality of operations in the sequence in response to the user input selecting each operation in the plurality of operations from the GUI comprises including the plurality of operations in the sequence without receiving user input specifying program code for performing the plurality of operations;

wherein the plurality of operations included in the sequence includes at least one motion control operation and at least one DAQ operation, wherein at least one of the DAQ operations included in the sequence is operable to control a DAQ measurement device to acquire measurement data of a device under test ~~based on an electrical signal from a sensor device coupled to the device under test~~;

wherein the method further comprises storing information representing the sequence of operations in a data structure, wherein the sequence of operations comprises the prototype.

62. (Previously Presented) The method of claim 61, further comprising:

accessing the data structure to determine the plurality of operations in the sequence;

determining software routines to execute in order to perform the plurality of operations in the sequence; and

executing the software routines.

63. - 65. (Canceled)

66. (Previously Presented) The method of claim 61,

wherein the prototype is operable to:

control a motion control device to move the device under test; and

control the DAQ measurement device to acquire the measurement data of the device under test.

67. (Previously Presented) The method of claim 61, further comprising:

performing the sequence of operations;

wherein said performing the sequence of operations comprises executing software routines in order to perform each operation in the sequence.

68. (Previously Presented) The method of claim 61, further comprising:

automatically generating a graphical program based on the sequence of operations, wherein the graphical program is executable to perform the specified sequence of operations, wherein the graphical program comprises a plurality of interconnected nodes that visually indicate functionality of the graphical program, wherein automatically generating the graphical program comprises automatically including the plurality of interconnected nodes in the graphical program without user input specifying the nodes.

69. (Previously Presented) The method of claim 1, further comprising:

displaying a visual indication of results of performing the sequence while the sequence is being created, wherein the visual indication enables a user to evaluate the

results of performing the sequence, wherein interactively displaying the visual indication comprises:

for each operation in at least a subset of the operations included in the sequence, updating the displayed visual indication in response to including the operation in the sequence in order to visually indicate a change in the results of performing the sequence, wherein the change is caused by including the operation in the sequence, wherein updating the displayed visual indication provides interactive visual feedback to the user indicating the change caused by including the operation in the sequence.

70. (Previously Presented) The method of claim 1,

wherein the plurality of operations included in the sequence includes a plurality of motion control operations;

wherein the method further comprises interactively displaying a graph illustrating a spatial trajectory cumulatively performed by the plurality of motion control operations, wherein interactively displaying the graph comprises:

for each motion control operation in the plurality of motion control operations included in the sequence, updating the graph in response to including the motion control operation in the sequence in order to visually indicate a change in the spatial trajectory, wherein the change in the spatial trajectory is caused by including the motion control operation in the sequence, wherein updating the graph provides interactive visual feedback to the user indicating the change caused by including the motion control operation in the sequence.

71. (Previously Presented) The method of claim 1, further comprising:

automatically converting the sequence of operations to a hardware configuration format usable for configuring a Field Programmable Gate Array (FPGA) device to perform the sequence of operations; and

configuring the FPGA device to perform the sequence of operations using the hardware configuration format.

72. (Previously Presented) The method of claim 1,

wherein said controlling the DAQ measurement device to acquire the measurement data of the device under test comprises controlling the DAQ measurement device to acquire waveform data of the device under test.

73. (Previously Presented) The method of claim 30, further comprising:

displaying a visual indication of results of performing the sequence while the sequence is being created, wherein the visual indication enables a user to evaluate the results of performing the sequence, wherein interactively displaying the visual indication comprises:

for each operation in at least a subset of the operations included in the sequence, updating the displayed visual indication in response to including the operation in the sequence in order to visually indicate a change in the results of performing the sequence, wherein the change is caused by including the operation in the sequence, wherein updating the displayed visual indication provides interactive visual feedback to the user indicating the change caused by including the operation in the sequence.

74. (Previously Presented) The method of claim 30,

wherein the plurality of operations included in the sequence includes a plurality of motion control operations;

wherein the method further comprises interactively displaying a graph illustrating a spatial trajectory cumulatively performed by the plurality of motion control operations, wherein interactively displaying the graph comprises:

for each motion control operation in the plurality of motion control operations included in the sequence, updating the graph in response to including the motion control operation in the sequence in order to visually indicate a change in the spatial trajectory, wherein the change in the spatial trajectory is caused by including the motion control operation in the sequence, wherein updating the graph provides interactive visual feedback to the user indicating the change caused by including the motion control operation in the sequence.

75. (Previously Presented) The method of claim 36,

wherein the plurality of operations included in the sequence includes a plurality of motion control operations;

wherein the method further comprises interactively displaying a graph illustrating a spatial trajectory cumulatively performed by the plurality of motion control operations, wherein interactively displaying the graph comprises:

for each motion control operation in the plurality of motion control operations included in the sequence, updating the graph in response to including the motion control operation in the sequence in order to visually indicate a change in the spatial trajectory, wherein the change in the spatial trajectory is caused by including the motion control operation in the sequence, wherein updating the graph provides interactive visual feedback to the user indicating the change caused by including the motion control operation in the sequence.

76. (Previously Presented) The memory medium of claim 37, wherein the program instructions are further executable to:

display a visual indication of results of performing the sequence while the sequence is being created, wherein the visual indication enables a user to evaluate the results of performing the sequence, wherein interactively displaying the visual indication comprises:

for each operation in at least a subset of the operations included in the sequence, updating the displayed visual indication in response to including the operation in the sequence in order to visually indicate a change in the results of performing the sequence, wherein the change is caused by including the operation in the sequence, wherein updating the displayed visual indication provides interactive visual feedback to the user indicating the change caused by including the operation in the sequence.

77. (Previously Presented) The memory medium of claim 37,

wherein the plurality of operations included in the sequence includes a plurality of motion control operations;

wherein the program instructions are further executable to interactively display a graph illustrating a spatial trajectory cumulatively performed by the plurality of motion control operations, wherein interactively displaying the graph comprises:

for each motion control operation in the plurality of motion control operations included in the sequence, updating the graph in response to including the motion control operation in the sequence in order to visually indicate a change in the spatial trajectory, wherein the change in the spatial trajectory is caused by including the motion control operation in the sequence, wherein updating the graph provides interactive visual feedback to the user indicating the change caused by including the motion control operation in the sequence.

78. (Previously Presented) The system of claim 43, wherein the processor is operable to further execute the program instructions stored in the memory to:

display a visual indication of results of performing the sequence while the sequence is being created, wherein the visual indication enables a user to evaluate the results of performing the sequence, wherein interactively displaying the visual indication comprises:

for each operation in at least a subset of the operations included in the sequence, updating the displayed visual indication in response to including the operation in the sequence in order to visually indicate a change in the results of performing the sequence, wherein the change is caused by including the operation in the sequence, wherein updating the displayed visual indication provides interactive visual feedback to the user indicating the change caused by including the operation in the sequence.

79. (Previously Presented) The system of claim 43,

wherein the plurality of operations included in the sequence includes a plurality of motion control operations;

wherein the processor is operable to further execute the program instructions stored in the memory to interactively display a graph illustrating a spatial trajectory cumulatively performed by the plurality of motion control operations, wherein interactively displaying the graph comprises:

for each motion control operation in the plurality of motion control operations included in the sequence, updating the graph in response to including the motion control operation in the sequence in order to visually indicate a change in the spatial trajectory, wherein the change in the spatial trajectory is caused by including the motion control operation in the sequence, wherein updating the graph provides interactive visual feedback to the user indicating the change caused by including the motion control operation in the sequence.

80. (Previously Presented) The method of claim 45,

wherein the plurality of operations included in the sequence includes a plurality of motion control operations;

wherein the method further comprises interactively displaying a graph illustrating a spatial trajectory cumulatively performed by the plurality of motion control operations, wherein interactively displaying the graph comprises:

for each motion control operation in the plurality of motion control operations included in the sequence, updating the graph in response to including the motion control operation in the sequence in order to visually indicate a change in the spatial trajectory, wherein the change in the spatial trajectory is caused by including the motion control operation in the sequence, wherein updating the graph provides interactive visual feedback to the user indicating the change caused by including the motion control operation in the sequence.

81. (Previously Presented) The method of claim 61,

wherein the plurality of operations included in the sequence includes a plurality of motion control operations;

wherein the method further comprises interactively displaying a graph illustrating a spatial trajectory cumulatively performed by the plurality of motion control operations, wherein interactively displaying the graph comprises:

for each motion control operation in the plurality of motion control operations included in the sequence, updating the graph in response to including the motion control operation in the sequence in order to visually indicate a change in the

spatial trajectory, wherein the change in the spatial trajectory is caused by including the motion control operation in the sequence, wherein updating the graph provides interactive visual feedback to the user indicating the change caused by including the motion control operation in the sequence.